UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
DUNCAN, MARC M

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 January 2002</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-38</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-38</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>11 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Schweitzer et al.

Claims 2, 3, 5, 8, 9, 10, 13, 14, 16, 18, 19, 20, 23, 25, 26, 27, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweitzer et al. in view of Beshears et al.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 13, 23, 30 and 34 claim producing a directed graph of programmable nodes that controls a flow of data and control of processing through the

system. A directed graph is never mentioned in the detailed description of the invention. Further, it is not clear as to where and how this directed graph is being produced. It is not clear if the graph being produced on a graphical user interface, if the graph is simply produced and stored in memory, etc. The examiner has therefore determined that the specification is not enabling to one of ordinary skill in the art for this claim limitation. All other claims depend from one of claims 1, 13, 23, 30 or 34 and therefore include all limitations of these claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the programmable nodes" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the Data-Flow Map" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the fault manager" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the backup node" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the primary node" in line 1 and "the back-up node" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim 10 recites the limitation "other fault managers" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the primary node" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the fault manager" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the programmable nodes" in 4 and "the data-flow map" in line 7. There is insufficient antecedent basis for these limitations in the claim.

Claim 15 recites the limitation "the programmable nodes" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the fault manager" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the fault manager" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "the programmable nodes" in line 6 and "the data-flow map" in line 9. There is insufficient antecedent basis for these limitations in the claim.

Claim 24 recites the limitation "the programmable nodes" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "the programmable nodes" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the data-flow map" in line 9. There is insufficient

antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the data-flow map" in line 3. There is insufficient

antecedent basis for this limitation in the claim.

All other rejected claims not mentioned specifically above are dependents of one

or more of the above claims and therefore include all limitations of the above-mentioned

claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Schweitzer et

al.

Regarding claim 1:

Schweitzer teaches producing a directed graph of the programmable nodes that

guides the flow of data and control of processing from one node to the next node

through the system in Fig. 1, col. 8 lines 24-30 and col. 14 line 66-col. 15 line 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 3, 5, 8, 9, 10, 13, 14, 16, 18, 19, 20, 23, 25, 26, 27, 28 and 30 are

rejected under 35 U.S.C. 103(a) as being unpatentable over Schweitzer et al. in view of

Beshears et al.

Regarding claim 2:

The teachings of Schweitzer are outlined above. Schweitzer further teaches

dynamically modifying the data-flow map in col. 4 lines 15-16, col. 8 lines 24-30 and col.

10 line 16.

Schweitzer does not explicitly teach failing over to redundant back-up nodes

based on thresholds established for the component hosts. Schweitzer does, however,

teach monitoring the state of each network device, making the system fault-tolerant and

avoiding any interruptions in col. 4 lines 6-7 and col. 8 lines 58-64.

Beshears teaches failing over to redundant back-up nodes based on thresholds established for the component hosts in col. 2 lines 4-13 and col. 7 lines 24-26.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the fault tolerance teachings of Beshears with the network accounting system of Schweitzer.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Schweitzer has an explicitly stated need for a fault tolerant system and desires the network accounting system to be reliable and efficient. Beshears meets the need of Schweitzer for fault tolerance with the teaching of 1:N sparing of network devices.

Regarding claim 3:

Beshears teaches wherein the system provides 1 to N level redundancy of nodes in col. 2 lines 4-13.

Regarding claim 5:

Beshears wherein the fault manager provides a back-up node for a primary node in col. 6 lines 41-49.

Regarding claim 8:

Beshears teaches measuring information pertaining to operational status of a node by determining threads running in a node and processor resources provided to the node in col. 6 line 50-col. 7 line 33.

Regarding claim 9:

Beshears teaches periodically polling each node on a node host for the node's operational status condition in col. 6 lines 43-44.

Regarding claim 10:

Beshears teaches determining if an operational status measure of a node goes below a set threshold in order to notify other fault managers in col. 7 lines 24-26.

Regarding claim 13:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 2.

Regarding claim 14:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 3.

Regarding claim 16:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 5.

Regarding claim 18:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 8.

Regarding claim 19:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 9.

Regarding claim 20:

The claim is rejected as the computer program product that causes the computer to perform the method of claim 10.

Regarding claim 23:

The teachings of Schweitzer and Beshears are outlined above.

Schweitzer and Beshears further teach a plurality of host computers that host a network accounting system in Schweitzer – Fig. 1.

Regarding claim 25:

Schweitzer teaches wherein the programmable nodes can be a data collector process that produces network accounting records, or an aggregation process that aggregates network accounting records, or an enhancement process that enhances attributes of network accounting records, or an output interface process that produces records for use by an application in col. 2 lines 35-53 and col. 10 line 42-col. 13 line 63 (this section details enhancement processes).

Regarding claim 26:

Schweitzer teaches wherein the data processing domain further comprises: a fault manager that executes the computer program to produce a dynamic modification of a directed graph in col. 8 lines 58-64.

Regarding claim 27:

Schweitzer teaches wherein the computer program product executes on a component that is a node manager, a local data manager, a remote data manager, an administrative server or an administrative client in col. 8 lines 58-64.

Regarding claim 28:

Beshears teaches context check-point a state of processing in the a data

processing domain to permit automatic recovery of the data processing domain to the

data processing domain's most recent processing context checkpoint; and execute an

operating system facility to provide the automatic recovery of the data processing

domain to the data processing domain's most recent processing context in col. 7 lines

34-51. Using an operating system facility to provide recovery is necessarily an inherent

function of a checkpointing system. Without an operating system, the computer could

not function.

Regarding claim 30:

The teachings of Schweitzer and Beshears are outlined above.

Schweitzer and Beshears further teach a processor in Schweitzer – Fig. 1. A

computer device, of which many are present in Figure 1, contains a processor.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The prior art not relied upon contains elements of the instant

claims and/or represents a current state of the art.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Marc M Duncan whose telephone number is 571-272-

3646. The examiner can normally be reached on M-T and TH-F 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md

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